

## AMENDMENTS TO THE CLAIMS

**Claim 1 (Canceled)**

**Claim 2 (Currently Amended)**      A laser welding method, comprising:  
varying a waveform and a frequency of a laser output in a controlled manner so as to prevent occurrence of weld defects;  
detecting a time change in light emission strength of a plasma or a plume generated from a laser welded portion;  
analyzing frequency characteristics of the light emission to obtain an amplitude of a frequency component which is ~~the~~ a same variation frequency of the laser output; and  
setting a laser output variation condition so that the amplitude of the frequency component becomes a maximum.

**Claim 3 (Currently Amended)**      A laser welding method, comprising:  
varying a waveform and a frequency of a laser output in a controlled manner so as to prevent occurrence of weld defects;  
detecting a time change in ~~the~~ light emission strength of a plasma or a plume generated from a laser welded portion;  
setting an arbitrary threshold value to the time change in the light emission strength of the plasma or the plume; and  
setting a laser output variation condition so that a sum of time at which the light emission strength becomes the threshold value or less ~~becomes~~ is a minimum.

**Claim 4 (Currently Amended)**      The laser welding method according to claim 3, ~~wherein~~ further comprising setting the laser output variation condition so that the sum of the time at which the light emission strength becomes the threshold value or less is set ~~for a longer time than 2 ms to a range between 2ms to 12ms.~~

**Claim 5 (Currently Amended)**      The laser welding method according to claim 2, further comprising:

setting an arbitrary threshold value to the time change in the light emission strength of the plasma or the plume, and

setting the laser output variation condition so that a sum of time at which the light emission strength becomes the threshold value or less ~~becomes~~ is a minimum.

**Claim 6 (Currently Amended)** The laser welding method according to claim 5, wherein further comprising setting the laser output variation condition so that the sum of the time at which the light emission strength becomes the threshold value or less is set ~~for a longer time than 2 ms~~ to a range between 2ms to 12ms.

**Claim 7 (New)** A laser welding method, comprising:

varying a waveform and a frequency of a laser output in a controlled manner so as to prevent occurrence of weld defects;

detecting a time change in light emission strength of a plasma or a plume generated from a laser welded portion;

setting an arbitrary threshold value to the time change in the light emission strength of the plasma or the plume;

analyzing frequency characteristics of the light emission to obtain an amplitude of a frequency component which is a same variation frequency of the laser output; and

setting a first laser output variation condition so that the amplitude of the frequency component becomes a maximum and setting a second laser output variation condition so that a sum of time at which the light emission strength becomes the threshold value or less is a minimum.

**Claim 8 (New)** The laser welding method according to claim 3, further comprising:

determining the time change in light emission strength of the plasma or the plume with respect to a variation in the laser output.